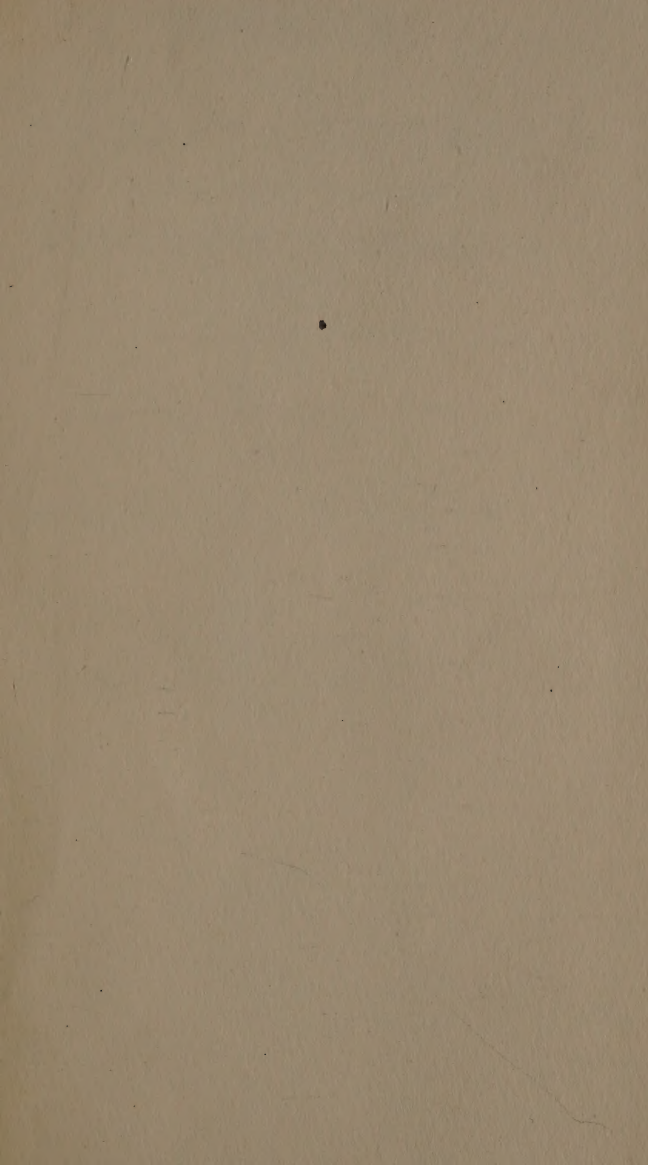


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PROOFS
THAT
CHOLERA MORBUS,
IS NOT A CONTAGIOUS, BUT AN
EPIDEMIC DISEASE :
WITH
A BRIEF DETAIL
OF THE
CAUSES AND TREATMENT
OF THIS
FORMIDABLE COMPLAINT.

By ALEXANDER FYFE, SURGEON,
CRIEFF.

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PROOFS

THAT

CHOLERA MORBUS

IS NOT A CONTAGIOUS, BUT AN

EPIDEMIC DISEASE:



CAUSES AND TREATMENT
OF
CHOLERA MORBUS
BY
ALEXANDER LEITCH, M.D.
OF
GLASGOW
AND
PHYSICIAN TO THE ROYAL INFIRMARY
OF
GLASGOW
GLASGOW: PUBLISHED BY J. & J. COCHRAN, 1817.
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By a Contagious disease, is meant one that is got by coming in contact with a person who is labouring under it. By an Epidemic disease is meant one got from the atmosphere or earth.

Now it must be obvious to every one that the first case of every complaint, whither called contagious or not, was produced without contagion, because the first man who was seized with small pox, for instance could not get these by contagion, for he being the first there was none before him from whom he *could* get them.

It must be also evident, that, cæteris paribus, the same causes which produced the small pox in the first man would produce them in the second and third, and so on through many generations, down to the last man who might be seized with them. But in the first man small pox were produced, without contagion, therefore they may be produced in every other man who takes them without contagion.

By this however I do not intend to insinuate, that small pox are not contagious, for I believe

that they are so. All that I mean is that they may be produced without contagion and so may every disease. This being the case it is evident that Cholera cannot be an exception, for it too must have been originated without contagion, and it may have been propagated without it, and altogether independent of it. This being the fact, it goes a certain way to remove that fear of contagion, from Cholera, which is so fierce as to threaten, the destruction of Commerce, trade and all that, in a worldly point of view, is valuable to man as a social being.

But did my proof of the non-contagious nature of Cholera rest on this insulated fact, it would be found very unsatisfactory; but the proofs which I am about to offer, are to me at least, perfectly conclusive, that Cholera is neither originated nor propagated by contagion, but other causes to be stated.

In order to see the force of these proofs we have first to attend to the particular causes of the complaint, the habits, and constitution of those who are, for the most part, seized with it, and next to the proofs themselves.

THE CAUSES OF CHOLERA.

I. OF THE PREDISPOSING CAUSES.—These are, anxiety of mind,—want of the necessaries of life, the abuse of Ardent Spirits,—and whatever tends to waste the nervous *energy*.

II. OF THE REMOTE CAUSES.—These are, in this country, an open mild Winter, a damp atmosphere,—general damp on the face of the

earth,—damp feet, every day repeated, damp clothes; houses or beds,—the absence of a due proportion of oxygen in the air and the presence of too much hydrogen and azote, arising from the general damp,—together with the decay of animal and vegetable matter, which, continually send out most noxious vapours and animalculæ, especially, during what may be called a black and green winter,

III. OF THE PROXIMATE CAUSES.—These are, great relaxation of the general system,—languor in the circulation,—venous congestion or turgescence,—intermixture of the various secretions,—obstructed perspiration,—obstructed urine,—and great irritability of the mucous membrane of the stomach and bowels,—together with a semi-paralysis of the great sympathetic nerves throughout their various ganglions and ramifications.

IV. OF THE EXCITING CAUSES.—These arise from the heterogeneous co-mixture of the various, secretions which in its nature is most irritating to the stomach and bowels, and most paralyzing to the involuntary nerves,—and from a species of animalculæ, produced in consequence of a mild winter from the putrescence of animal and vegetable matter and wafted through the air according to the direction of winds. These animalculæ, in certain districts, may be seen in the rays of the sun, even by the naked eye, in myriads, forming moving and living clouds—so that every time a man opens his mouth, while breathing in the midst of them, he receives into it thousands of them which are not only swallowed with the saliva, but also inhaled into the lungs.

Such are the causes of this awful disease, in proofs of which I humbly offer the following facts and reasons.

I. It is a well known fact that a damp atmosphere especially, when favoured with damp situations, such as lie low and by the sides of rivers, never fails to produce in certain individuals of relaxed habits—bowel complaints, which are often attended with vomiting spasms and cramps, the violence of which are always in proportion to the length of time the damp weather has prevailed and the lowness of the situation, especially when by the sides of rivers. For the truth of this I appeal to the Medical men and inhabitants of Glasgow—among whom I spent three sessions in study after I had got my Diploma from the College of Surgeons at Edinburgh, during which time I had ample opportunity not only to see but to experience in my own body the effects of damp in producing Cholera, and the reason why the complaint was not so severe then as it is now is easily accounted for on the ground that the continuance of the damp was not so long. The reason why Cholera has been so long in breaking out in Glasgow at this time may also be easily accounted for on the ground of the prevalence of Typhus Fever in that city. The one Epidemic having kept out or neutralized the other.

Typhus was also prevailing in Edinburgh at the time I left it in December last, so that this may account for the delay of the prevalence of the disease in that city also. It is a well known fact that no two general diseases can prevail in a human body at one and the same time.

In explaining my views of the causes of Chol-

era to an esteemed friend in this place, he wisely remarked, that from my views a question would naturally strike every one, viz.—“If Cholera be owing to damp, why was it never heard of before in this country seeing we have had many damp seasons?” The answer I give to this question is this—because there never was a period in the history of this country when so much Ardent Spirits were used as there has been during the two or three years that have just past away—because, if ever there was a period in the history of this country: when the continuance of the mildness and damp during winter, were as long, and as great as they have been during the last winter, there never was one more remarkable for these. It was only this day, 2d March, that I was told that a farmer in this neighbourhood, which may be said to be in the highlands of Scotland—dug up his potatoes which ought to have been raised in the autumn, yet he found them as good as if they had been gathered then, and as few of them spoiled with frost.

Moreover in answer to the question at issue I would remark, and hundreds of medical men in London, Dublin, Glasgow and Edinburgh, can support me in the remark, that Cholera was during certain seasons especially damp ones—known in this country to have carried thousands to their grave long before the present panic arose; and that what gave rise to all the present alarm was the prevalence of the disease on the Continent.

II. When the Cholera was raging in Russia and Poland a stop was, in a great measure put to it, by the occurrence of dry weather,

which at the time it happened, was considered by the people in this country, as very unfavourable, but which turned out to be otherwise, or most favourable. Again when the damp weather set in—the Cholera again began its ravages: And again when the frost and snow came on, an end was put to the prevalence of the disease.

III. It was remarked in Russia and Poland that the disease followed the course of rivers, that is it was found to prevail most in situations near to rivers which are in general remarkable for being damp especially if they lie low.

IV. It is a well known fact, that in Cholera the blood, drawn from patients, is unusually black,—and it is a fact which I have often observed, and which may be observed by every Surgeon, that during the long continuance of damp weather the blood will be found to be unusually black in every case whether the patient be labouring under Cholera or not. During the last winter I have had frequent occasions to draw blood, and in every case, whatever was the complaint, the blood was always remarkably black. This is easily accounted for when we remember, that the blood depends, for its purity and bright redness, upon the purity and oxygen of the air we breathe—and that during damp the air is never pure and has in it too little oxygen. By the way it occurs to us that during the long continuance of damp weather it would be an excellent plan to have the rooms frequently fumigated with Oxygen Gas, and to keep the air in them always dry with strong fires.

V. By the kindness of Divine providence, it is in general so ordered, at least in this country, that the ground is, during the dead time of the

year, covered with snow which serves to bury all the dead animal and vegetable matter which lie on the face of the earth during this period; and thus the noxious vapours and the pernicious animalculæ, which during a black and green winter are constantly arising from these putrid sources, are prevented from infecting the atmosphere or through it, human beings. And not only so but by means of frost and snow the general damp is, as it were, sealed up, and obliged to find its way through deep and hidden paths to the ocean, or it is by a sudden thaw quickly hurried to the same receptacle, like the Salmon, for purification by salt—and then it is returned to us in showers of purified rain. But for wise and righteous purposes it has pleased, the Almighty to refrain from burying the dead and putrid matter by snow as on former occasions, and to allow us to dwell for a season in the midst of an unpurified damp atmosphere. Hence we see what have been the awful consequences. Cholera has killed its thousands and Typhus Fever which arises from the same source, has killed, in our country its tens of thousands. Considering then the long continuance of damp weather, and the exhalations of putrid vapours ---diffused far and wide, we need be at no loss to account for the Cholera.

VI. "It is the principal of evaporation producing cold that occasions the injury which persons sustain by sitting in wet clothes. In these circumstances, it is not the water that hangs upon them that produces the mischief, but the sudden losses of large portions of caloric." On this principle it is easy to account for the following symptoms which are found in persons

under Cholera. They are detailed by Dr. Abercrombie, in his usual elegant, expressive and perspicuous style,—“The eyes, says he, are sunk in a remarkable manner, with blueness of the skin around the eyes and the mouth, and the whole aspect is peculiarly exhausted and cadaverous. The surface of the body is generally cold;—the skin, especially on the hands, fingers, and feet, is remarkably shrivelled, cold, and blue; and this blueness extends sometimes over other parts of the body. There is no secretion of urine, &c.” We say it is easy to account for these symptoms on the principle already mentioned, viz.—that of evaporation.—For during the whole of last winter, it can not be said the feet or clothes of those who were exposed to the open air and treading daily on the damp earths surface, were very dry.—How fearfully then must their constitutions have suffered from the great and continual losses of caloric or natural heat? It is easy to see how a vessel in the course of time may be emptied by drops,—so it is easy to see how, by losing a little of the natural heat, collapse, and the coldness of death may at last occur, and the lamp of life vanish away, like the twinkling of an eye.

The sudden manner in which Cholera appears and executes its frightful work, forms no objection whatever to these arguments, because it is the involuntary,—the imperceptible, and the insensible part of our system, upon the healthy actions and strength of which our life more immediately and constantly depends, which more immediately suffers from the long continuance of damp. This is well illustrated in Mr. Hamilton Bell’s able work on the subjects of Cholera.

Hence it is easy to see, how the last drop of vital energy may be always ready to fall before we become aware of it, or find the means of stopping this awful descent. No doubt strong and robust constitutions have such a power of generating and regenerating animal heat within themselves, that they can brave many storms and recover many losses, but the feeble and debauched will fall victims under such circumstances as we have mentioned.

VII. There are spasms and cramps present in Cholera. Now nothing is more fitted for producing these, than exposures to a damp and cold atmosphere, together with irritating substances, and secretions in the stomach and bowels. In confirmation of this we give the following, from Dr. Thomas' Practice of Physic. "Tetanic affections (says this able Author) are occasioned by exposures to cold when the body is under perspiration,—sleeping in the open air, or on *damp ground*, or by the presence of irritating substances in the stomach and bowels, &c." Now where is the person who has not, in the course of such a damp winter as we have had, experienced daily, checks both to the sensible and insensible perspiration? And what can be more irritating to the stomach and bowels than the putrid matter of long obstructed urine and perspiration.

VIII. There are depression and languor present in Cholera. Now every body knows that during damp days, they invariably experience a degree of languor and dulness of spirits, and this is easily accounted for, when we remember that during damp weather, every man has to support on his body three times the weight

that he has to endure in dry. His clothes are damp,—the air he breathes is damp, and the weight of this damp air is terrible to bear, while the perspiration being suppressed, and the blood not circulating through the extreme vessels—all are thrown in upon the internal organs, oppressing, and overwhelming them.

IX. Though Mr. Moir has attempted to prove that the disease is “virulently contagious,” tho’ he has no more doubt of its being so, than he has of his own existence, and tho’ from the circumstances in which he as an individual, may have been placed, he may have, from a predisposition to the side of the contagionists, been overwhelmed with what he considered proofs in support of the doctrine, yet it does not follow that he has been led to view the thing altogether free of that prejudice which he attributes to the anti-contagionists, nor does it follow that his doctrine is the true one.---Nay the very reverse of it appears to us to be consistent with what we have already said and supported by the views given. Mr. Moirs’ doctrine is founded upon the following assertions, (for after reading his pamphlet---I do not find these assertions substantiated by demonstrative facts) viz.---that “no sooner does a case shew itself in any particular street or district, than, if entire insolation be not immediately effected, a second and a third follow, and at length the whole neighbourhood is subjected to its influence.”---Now this first assertion is not consistant with fact, for if it were so, it must follow that Doctors and sick nurses must also have been “subjected to its influence,” whereas it rarely happens that they are so; only two medical men, and two or three

sick nurses, out of many hundreds, have been seized with the complaint.

The second assertion, on which his doctrine is founded, is that "Not a single case has occurred where communication with the infected could not be readily traced out." The first man that was seized with Cholera, whither, Mr. Moir will believe it or not, must have got the disease without contagion, besides—Mr. Moir must *now* be aware that the first case of Cholera that took place at Haddington was also produced without contagion, as the person had never been known to have come in contact with any one labouring under the disease, or with any one who was infected with it. Were it necessary thousands of instances might be given to disprove that in every case of Cholera, communications with the infected was the cause that produced it. I would only refer Mr. Moir and all the supporters of contagion, to Mr. Bell's excellent and able work in which it is demonstrated by innumerable instances, where Cholera broke out simultaneously—so that it was impossible to have got it by contagion, seeing there was no time for communication. If this does not prove the disease to be Epidemic, I do not know what will: for "surely the mind must be strangely constituted which can shut itself against the fact of its being "virulently" so." I might also refer Mr. Moir and those on his side to Mr. Laurie's work and to the various accounts, which have been given, by the Indian and Russian Physicians, of the origin and progress of Cholera. In these, innumerable instances will be found, where no trace of contag-

ion could be discovered and innumerable facts to disprove the assertion of Mr. Moir.

The third assertion of Mr. Moir, is "That where entire intercourse has been completely cut off, the progress of the disease has been to a certainty arrested." Did ever Mr. Moir know an instance where entire intercourse was completely cut off? Certainly, we, in these days never abandon our fellow creatures so entirely as to cut them off completely from all communications with us, for such as Mr. Moir and other Medical men must have communication with patients labouring under Cholera, after which Mr. Moir, sees, it may be the apothecary—next his own patients and next he sees and mingles with his friends.—Now with all these he has communication; yet none of them, perchance, is affected. Now while beside the patient, labouring under Cholera, did he not touch him? did he not inhale the putrid or infected air around him? or was it possible for him to live without breathing while present with his patients. No—no—In order to cut off all communications, Doctors, sick nurses, and patients would all require to be buried alive, and even then the grave diggers would require, along with those who carried these to their graves, to be buried along with them! and who is to do this?

Since then it is manifestly impossible to effect completely the entire breaking up of all communications with the diseased, it would follow according to Mr. Moir's doctrine, that the progress of the disease can never be to a certainty arrested so long as there are two human beings within reach of one another on the face of the earth, unless, by entire insolation, Mr. Moir

means, that so soon as a man finds himself affected with the Cholera, he should banish or bury himself, so that no human being might come in contact with him. But as it is evident that the progress of the disease can never altogether be arrested in this way.—We must look to a higher source than that of human agency for putting a complete arrest to the progress of this and every other pestilential disease. At the same time I think it not only advisable but dutiful to forbear, during the prevalence of an Epidemic, all unnecessary intercourse with the sick, because whatever may be the complaint under which the patient is labouring, it is evident that, the sick room is at no time the most favourable place for health, as in it, we never can breathe any thing but a contaminated atmosphere, that is air, the oxygen of which has been much consumed by the patient, so that a superabundance of that part of the air which by itself is pernicious and even destructive to life remains along with the effluvia arising from the patient himself. Now during a damp season, the oxygen of the atmosphere is always in a diminished proportion—so that the less we are in the sick room the better for our health. In no other sense do I consider it dangerous to visit patients in Cholera—for from what has been said it is clear that the disease is produced and propagated by other means than contagion.

Were farther proofs of this necessary I might refer to the Appendix of Mr. Moir's own work—where he gives some of Dr. Clarke's observations on the diseases which prevail during long voyages to hot countries. From these observations, as well as from the well known fact that dur-

ing long voyages to hot countries, the sailors and passengers are constantly exposed to the moist which is produced by the evaporation which from the heat of the sun is constantly going on from the sea, we can at once perceive that this forms the cause of Cholera, and this idea is confirmed by Dr. Girdlestone who says, that “cold is the most general exciting cause of these spasmodic affections,” “it appears that not only the damps from the earth, (or from the sea by evaporation he might have added) but drinking large quantities of cold water after intoxication and sudden exposition to the winds when wet with perspiration had the most powerful influence in producing a sudden and dangerous attack.” From this we can learn how spasmodic Cholera may be produced without contagion and altogether independent of any importation of it from Asia, Russia, or any foreign land.

It appears to me, from these facts taken in connection with what I have said, perfectly ridiculous to say when we meet with a case of severe spasmodic Cholera in our country—“Oh! it is the real Asiatic Cholera,” it must have been imported from Asia.” Why if exposures to cold when the body is wet with perspiration produces spasmodic Cholera in Asia—are there none in this country who expose themselves to cold when their bodies are wet with perspiration? If the damps from the earth produce it in Asia—have we no damps arising from the earth in Scotland? If drinking large quantities of cold water after intoxication produce it in Asia, have we none of this kind of work going on in Scotland? “O but you will say the climate is

different in Asia so that these causes will act differently there from what they do here,"—be it so—it can only be in degree, their effects must be the same in kind.—Besides in order to have the "real Asiatic Cholera," you must have the real Asiatic Climate to dwell in.

If the contagionists would consider these things in the simple and unbiassed light of common sense, we humbly think, they would change their opinions—of the causes of Cholera, and should they do so I think they should confess to the world that they were mistaken.—But it is true that, after we have published our opinions we are so averse to retract what we have said, even tho' wrong, that we would, if possible compass sea and land, for incidents to support our position—I know well how tenacious the mind is of its own notions, for in a work which I published on "Necessity and Free Agency and the Reciprocal influence of Body and Mind." I was led, from extreme anxiety to relieve the minds of persons—labouring under what is called "Religious Melancholy," from the fear that they were not elected, to reason myself into the belief that, there might be found some in heaven who were not elected, and accordingly I published the following doctrine in that book, viz., that "It is possible nay probable that some may be found in heaven who were not elected." Now had this sentence been left out of the work along with the few arguments connected with it, I would have saved myself of much sin and much pain—and have considered the work otherwise useful to the world, from the important cases mentioned in it as demonstrative of the Reciprocal influence of Body and Mind,

and from other facts and arguments, relative to the tenderness with which medical men ought to treat the minds as well as the bodies of men. On due reflection, after many battles in support of that unhappy sentence mentioned, I have seen that considering the sin of man and the total depravity of human nature, it is impossible in the nature of things for any human being, to make himself differ in point of worth in the sight of God from any other, that in fact it is impossible for any man to be saved unless by the sovereign and determinate will of God. I have seen also that it forms one of the most comforting ideas that can enter into the mind of a fallen human being to think that God has determined to save vast multitudes of men, and that nothing can possibly prevent him in his determination. That it is utterly impossible that a single soul can be lost who wishes to be saved by Jesus Christ—and that to them who so wishes salvation their is so much common sense, so much rationality and so much wisdom given, that it is impossible for them to abuse the grace of God or the doctrine of predestination. Such are now my decided views of election by Grace. That which afforded me decision on this point were the following words—"By grace are ye saved through faith and that not of yourselves it is the gift of God." It may be asked, what concern has this with the point at issue? It has this concern with it, that by bringing it to the remembrance of the christian world, that as "Not a Sparrow can fall to the ground without our heavenly father, so neither can a human being be attacked with any complaint without his decree.—Hence it is more than vain to terrify

people with Cholera as if it were not under the control of God, or as if it could seize upon any man without his will, as if it could be warded off by human precautions independent of God.—There is positively a very general practical disbelief of the all prevading and particular providence of God, which is at the foundation of all that panic and alarm which have been so industriously spread, through the length and breadth of the land, to the great injury of trade and commerce and to the sad support of the natural causes of Cholera. Besides, by refuting a doctrine once held by myself, I see it is possible for others to do the same and in these days when so many false and erroneous doctrines, especially on religious subjects, are sent forth into the world—I would humbly beg of the authors of them to refute them in time, otherwise they may sink under them to eternity.

X. It is well known to all medical men, and indeed to most of men, that nothing is so well fitted to bring on any given complaint, other circumstances favouring, as *fear*. To this as a cause, I presume we may very warrentably, attribute thousands of cases of Cholera,—for *fear* of itself, will give rise to a very severe bowel complaint, and sympathy will make a man vomit or even feel spasms and cramps—for this reason I think it proper thus distinetly to mention *fear* and to request the public to be on their guard against it, seeing the disease is in the hand of God and is not that virulently contagious complaint which it has been represented to be. I do believe that the letters written by “Hydrophobius,” have done a great deal of good as a mean in preventing

the Cholera, by showing the absurdity of propagating fear through the country.

In an able and pious lecture from the 5th to the 13th verse of the 91st Psalm, delivered by a Revd. divine in this place it was clearly demonstrated that all diseases are in the hands of God, and that the pestilence may be said to be peculiarly so.—It were much to be wished that Clergymen in general would teach the people the same doctrine and point out to them the only hiding place from the pestilence—It is “Under the shadow of the Almighty,”—beautifully described in the same 91st Psalm. In connection with what I have been saying about *fear* as a cause of Cholera. I beg leave to mention that a particular friend of mine (Dr. Thatcher of Edinburgh) said to me once when attending along with him some poor children in the Cowgate who were labouring under, Scarlatina Maligna—and when he saw me afraid to enter their infected and confined apartments—“Fyfe, said he, what are you afraid of? Go boldly about your duty and a kind providence will take care of you.” I trust every man will take the advice and banish all slavish fear from their minds.

It would be one of the best preventatives of Cholera, I know—were the wealthy part of the community to give ample employment and ample wages to the labouring classes and were these to give up drinking whisky. Has not the stagnation of trade produced by the delay in passing the Reform Bill and the fear, anxiety and consternation occasioned by this delay and this stagnation, had a great hand in producing Cholera? I have no hesitation in say-

ing that it has and therefore I humbly trust that parliament will speedily relieve the country from that awful anxiety under which it has so long laboured and grant to the people the desire of their heart. The united voice of interest, duty and humanity calls upon them to do so—and I have no doubt but the thunders of this voice will soon be heard and answered. When it is—the fears of Cholera will be dispelled amidst the bustle of business and the joys of a free, an active and happy people.

All that now remains, is to say a few things respecting the treatment of Cholera—and on this subject little need be said for having clearly pointed out the causes of this disease, all that is requisite is to remove the causes and the effects will cease.

Now the principal causes—no man can remove, and we ought to be fully aware of this in order that we may apply to the proper quarter—yet under the divine blessing and direction much may be done by men. We shall therefore shortly point out what occurs to us to be the proper treatment of Cholera.

TREATMENT.

I. OF THE INCIPIENT STAGE.—All that is necessary to be done in this stage, is first to animate the mind with hope, next to remove as far as possible the causes, and lastly to fortify the constitution against a renewal of the attack. This may be done, by directing the mind to the infinite fulness and almighty power of God

and to his love towards a lost and helpless world as manifested in Christ—and to the facts that when taken in its incipient or early stage, Cholera is easily managed. Next a mixture composed of the tincture of rhubarb, magnesia, camphorated tincture of opium, oil of turpentine and peppermint water may be given.—The turpentine in this mixture acts like a charm, from its power in destroying animalculæ or worms and determinating to the kidneys. After the bowel complaint, &c. are removed by this—all that is necessary to be done is to fortify the constitution against the recurrence of the complaint. This is to be done by wearing a double plie of flannel around the bowels and stomach, by wearing a warming plaister, chiefly composed of venice turpentine—camphor and burgundy pitch, over the kidneys and stomach—by the use of Quinine and port Wine—together with nourishing diet.—As there is always a supression of urine in Cholera, there is nothing so well fitted to prevent this as the plaisters we have mentioned.

II. OF THE ADVANCED STAGE.---When arrived at this stage the patient finds the vomiting, purging, spasms, and cramps very severe, together with other symptoms. In order to get the better of these, if there be much weakness---cold extremities and ghastly look, present---the first thing to be done is to have the plaisters recommended above applied to the stomach and kidneys---then to have the stomach and bowels rolled in double flannel and a bag of hot sand put opposite to the stomach and kidneys, so as to cause the strength of the plaisters to act. This done a mixture of brandy

---oil of nutmeg---tincture of rhubarb and cinnamon water should be given. The dose of this mixture must be in proportion to the necessity of the case and to the habits and constitution of the patient. To prescribe as a general rule---“tea spoonfuls or table spoonfuls,” is in my humble opinion ridiculous---for in some cases it may be necessary to give wine glassfuls of this mixture every ten minutes. A virulent disease of this kind is not to be arrested by ordinary doses---Indeed to give such, is only to trifle with the complaint and allow it to get the ascendancy. Should the use of this mixture not overcome the virulence of the disease in the course of an hour.---Let a clyster of beef tea, tinct. opii and turpentine be given. To be repeated every five minutes if necessary, at the same time pushing the mixture with the addition of some of the camphorated tincture of opium.---By these active means, it will be found, that a failure in success, will be of rare occurrence, but if it should happen, that these means fail of success:---then let a mixture of nitrous acid, camphor, opium, sweet spirits of nitre and peppermint water be given in doses according to circumstances. This is a remedy, when properly managed, which will seldom or ever fail of success. The nitrous acid has been again and again tried in India, and found very successful. I have also tried it in Edinburgh while there, and invariably found it successful. Indeed, to those who daily consider the nature of the complaint, and the causes which produce it, it will at once appear, that the remedy is adopted to the removal of the disease. The powerful tendency which this

mixture has to produce a free flow of urine, to neutralize the morbid contents of the stomach and bowels---and to destroy the animalculæ that may be drank with water or swallowed with the saliva, when breathing in the midst of an atmosphere, infested with them. Besides this mixture destroys the morbid irritability of the mucous membrane of the stomach and bowels, and so puts a stop to the vomiting and purging---as well as takes away the spasms and cramps which are produced---from this irritability, together with venous congestion and the morbid matter refered to.

III. OF THE MATURED STAGE.---By matured stage---I mean, that the disease has arrived at that point at which, the patient stands for a little hovering between life and death---If the disease proceed farther there is no hope for him: but if it be turned back he may recover. Much wisdom and care are necessary both on the part of the patient and medical attendants at this stage---it is a stage of the disease which is marked by extreme debility, and therefore requires the utmost exertions on the part of the practioner, in order to support the strength of the patient and to ward off the strokes of the disease. Stimulents combined with anti-spasmodics are the chief remedies in this stage. These must be given in large doses till reaction be fairly commenced.

Stimulating clysters must also be given. The best stimuli for this stage of the complaint will be found in a mixture of genuine hollands with the oil of nutmegs and opium.

The best clysters are those which are made of beef tea and turpentine.

I have all along considered and stoutly maintained, that obstructed perspiration and urine gave rise to Cholera and formed the more immediate causes of it, the more I hear about it, and the more I consider the subject, I am the more, confirmed in this opinion.

Therefore, the grand object is to produce, by every possible means a full and copious flow of perspiration and also of urine. In order to accomplish this desirable end, due attention must be paid to the present state of the patient and also to his previous habits. It is a well known fact that stimulents, such as ardent spirits, have a powerful influence in producing a flow of urine and also copious perspiration. Now when these are used to excess every day—we can easily perceive how the body must become gradually weaker and weaker. We can also see how, that, by the habitual use of Ardent Spirits, it will by and by happen, that, what at first produced perspiration, will soon cease to do so, unless therefore the dose be greatly increased, perspiration will only be begun, by the ordinary dose, without being fairly carried to the surface of the body—hence it loiters about the internal organs, takes away the appetite, produces bile, and nausea, and an incessant craving for more spirits.—We can easily see also how the perspiration, being merely begun by a glass or two of spirits, can be easily obstructed by the least exposure to cold or damp.—Considering these things and the vast number who addict themselves to the daily use of ardent spirits, and considering at the same time the dampness of the winter that is past, and above all considering that, such as have been most addicted to the daily use of

ardent spirits have been for the most part, the the very individuals who have fallen victims to the Cholera.—I think it is absurd to speak of Cholera as a contagious disease. But having thus considered the causes of the disease and the habits of our patients, we will at once see the necessity of increasing the doses of stimulents to a very great degree in order to produce perspiration, and a free flow of urine—Thus, when we wish to produce sleep in a patient who has been addicted to the daily use of opium, it may be necessary to give him six times as much for this purpose as would serve a person who had never been in the habit of using it—so in order to produce a copious flow of urine and of perspiration, if this is to be done by the use of Ardent Spirits to a person who has been in the daily habit of using them, the dose must be greatly increased beyond his daily or ordinary allowance. But in Cholera, it often happens, that, from the irritability of the stomach, ardent spirits are immediately rejected—so that from them the patient can find no relief from his agonies in the matured stage of the complaint—In this case the irritability of the stomach must be overcome by the use of the Nitrous acid, to be given as formerly prescribed. When this is done, the mixture of hollands—oil of nutmegs and opium may be given. In addition to the use of Internal Stimulents and Clysters—The body should after the vomiting is overcome, be well rubbed over for ten minutes with the most stimulating linament that can be devised, after which, hot bags should be placed opposite the kidneys and stomach, and, the patient, having got a large

dose of the mixture with hollands—should be covered over with bed clothes, under which he ought to keep his head until a copious perspiration be produced. If this be obtained there will remain little doubt of the patient's recovery. His constitution is afterwards to be strengthened by nourishing diet, Quinine and port wine.

Thus we have given a very brief view of the causes and treatment of Cholera Morbus—and we think, that from what we have said—it must appear, evident, that Cholera is an Epidemic disease affecting certain individuals of delicate, irregular, and dissipated habits—and broken down constitutions: This is evident from the whole history of the rise and progress of Cholera. That which has given rise to the idea of its being a contagious disease, is the fact, that in many instances, individuals have been seized with it who had been in contact with those who were labouring under it, but the fact is that birds of a feather generally flock together, and as Cholera fixes upon persons of the description we have mentioned, it was just as natural for it to seize upon them when together as when separated, yet since it has seized upon the greater proportion without their having come in contact with persons affected, it is manifest that it does not depend upon contagion but upon the other causes mentioned, which have been proved sufficient to produce it, altogether independent of contagion.

From what we have said it must appear to every one, that there is an absolute necessity for giving up the daily use of Ardent Spirits—au-

less men are determined to ruin their constitutions and bring upon themselves a liability to this awful disease—and so become suicides.

It must also appear, that since *fear*, confined and contaminated air, are predisposing and often exciting causes of Epidemic diseases—it would be a tempting of providence, a most presumptuous sin, to cast ourselves unnecessarily into the sick room, where nothing but confined and contaminated air can be breathed and where nothing but the most gloomy, depressing and melancholy ideas are naturally produced.—By contaminated air I do not merely mean, the bad effluvia arising from the perspiration of the patient, but that air which by confinement and by the patient breathing in it night and day, is deprived of a due proportion of oxygen.—It is however a weak subterfuge to say, that because the sick room is not a healthy place, and because a person is, *cæteris paribus*, more likely to be infected with an Epidemic disease there, than in the open air or at a distance from the patient, therefore the disease is Virulently Contagious—and that if you can cut off all communications with the sick you can to a certainty arrest the progress of the disease—Since the disease is an Epidemic one, how is it possible thus to arrest, completely its progress?—the thing is absurd. The progress of the disease can never be completely arrested till the Epidemic be so. And this, God only can effect.—To him therefore let us look for safety and deliverance and not to quarters where they cannot be found.—At the same time every wise man will use all dutiful and lawful endeavours to preserve his own life and the lives of others.—In this respect, he who most firmly believes in

the absolute predestination of God, will be the most faithful in the use of all rational means.

Since I sent the preceding pages to the press I have seen a letter sent by Mr. Moir to R. Macnish, Esqr., in which Mr. Moir thus expresses himself—"for wherever you can stop the communication," (that is human intercourse) "I will answer with my life for it, that you will stop the disease." Now unless Mr. Moir can prove, that there never was a case or cases of Cholera produced without contagion, he should not be so free in staking his life in support of a false doctrine.—It is a fact which Mr. Moir dare not deny—that the first case of Cholera which ever happened was produced without contagion—and there are innumerable instances on record proving that Cholera has seized, in one night multitudes—who before they were seized, had no communication whatever with persons infected by it. I think it will "puzzle" Mr. Moir's logic to account for these facts, on the ground of contagion. It is true that the atmosphere cannot exert a voluntary effort, so as to go "either east, west, north, or south," and confine itself "within so many square feet," in a street or lane, till the individuals dwelling in these be all infected, and then remove at pleasure. But living and moving creatures can exert a voluntary power, so as to go east, west, north, or south, according to their inclination, and confine themselves first to this district and then to that according as they shall be commissioned. Now what are these animalculæ which have been so often seen in the air during last winter, but living and voluntary beings? It is surely much

more rational to consider *them* as the exciting cause of Cholera than to say that *contagion* is so—for as we have seen, if contagion were the exciting cause it would be utterly *impossible* to account for those thousands of cases which have occurred altogether independent of contagion. As a contrast to Mr. Moir's letter, we beg leave to give the following heroic instance of a Medical man, who actually pledged his life in the firm belief that Cholera is not a contagious disease.—“Interesting Fact.”—“For the purpose of endeavouring to set all doubt at rest respecting the contagious or non-contagious nature of Cholera. A Medical gentleman on Wednesday last made the following experiment. Immediately after the death of a Cholera patient in the hospital, he undressed, went into the same bed and covered himself with the same clothes, which had the moment before been occupied by the person who died. He remained for two hours and a half in the bed, thus exposing himself as much as possible to the risk of imbibing the disease if it be really contagious. He was in excellent health at the time he made the experiment, and up to this hour, we have much pleasure in stating, he continues to remain so. So convinced were some of his medical brethren that he would fall a victim, that next day numerous inquiries were made at the hospital, of the hour when he died.—“*Glasgow Courier of Tuesday.*” Unfortunately for Mr. Moir, he can offer no such proof in support of the truth of his doctrine. Enough, I trust has been now said to prove the doctrine with which we set out, viz. That Cholera is not a Contagious, but an Epidemic disease.

Notwithstanding all that we have said in order to prove the non-contagious nature of Cholera; still some will be disposed to say, that the reasons and arguments used for this purpose might with equal force, be used to prove the non-contagious nature of every other disease.

A little reflection however will be quite sufficient to satisfy every candid mind that this is not the fact. For while the original causes of those diseases that are really contagious—such as small pox—lie hid in impenetrable obscurity—the causes of Cholera are perfectly manifest as we have proved.

Again while the contagious nature of small pox and such like diseases, is so undoubted and so clearly proved, that no man in his senses, who had not previously had the disease, would lie down in the same bed with a patient labouring under them in order to ascertain whither they were contagious or not.

The contagious nature of Cholera is so extremely doubtful that, as we have seen, a medical man actually made the experiment formerly mentioned, and found that the disease was not contagious---otherwise he would have been seized with it.

P. S. I have just seen in the Scotsman news paper a verification of the doctrines which I have held in the preceding pages---respecting the causes and cure of Cholera. It is contained in a letter, dated, *Vienna, August 9*---and signed by the high Commissioner, *River*---In this letter, it is stated that by producing copious perspiration—238 individuals were saved out of 240

who were seized with the disease---two only having died and these two, because they would not use the remedy which was the means of saving the rest. As it may be interesting to my readers and as it is worthy to be kept on record, I here beg leave to mention the remedy, nearly as I have got it from the Scotsman of Saturday 10 March. "A pint of strong spirits of wine and half a pint of good white wine vinegar, add to them one ounce of powdered camphor---one ounce of flour of mustard or bruised mustard seeds, a quarter of an ounce of ground pepper and a full tea spoonful of bruised garlick, and lastly half an ounce of powdered cantbarides." These are to be mixed in a bottle and exposed to the sun for twelve hours, or near the fire---When a person is attacked---rub the body with this, continuing to rub hard for not more than 15 minutes, giving at the same time a strong drink to the patient composed of two parts of chamomile flowers and one of balm mint.

Let the patient then be well covered over with bed clothes and let him keep his head under the clothes for three hours, warm bags or bladders of warm water being applied to the stomach and navel, then a copious perspiration will break out. Care must be taken that the patient, during this time, do not sleep---At the end of two or three hours he may have his head uncovered, when he will enjoy a sweet slumber of five or six hours sleep---during which a gentle perspiration will go on and the patient will awake quite cured of the disease and will only feel weak---Great care must be taken that the patient do not lift even a finger from under the bed clothes while the perspiration is going on.

